

Davis-Monthan AFB Energy Program

We're proud of DMAFB energy program. We've completed several energy related projects and we're exploring a variety of solar and alternative energy projects. DMAFB has a high solar potential with an average 6.5 solar hours per day, 365 days per year, 3,300 cooling degree days per year. We have the largest community based Photovoltaic (PV) system in the United States with an 3.4 Megawatts (MW) ground mount PV over 20 acres, and 2.7 MW rooftop PV. This system provides 75% of total energy during daylight and was operational on 24 December 2009.

We've installed a solar system for heating the base outdoor pool allowing us to open the pool from April through October. In June 2009 we put solar hot water pre-heaters on three of our seven dormitories for a savings of \$8,000.00 per year per dormitory. We installed many solar powered LED-lighted crosswalk signs for added safety for our Airmen and we installed sensor operated, LED lighting systems for two major parking lots. DMAFB worked with Unisolar technologies to complete a survey of all base-wide standing seam metal roofs that would be prime targets for solar applications. We have 21 facilities that are suitable for photovoltaic applications.

Additionally, in January 2010, we released a formal Request for Proposal to the public for a maximum 20 Megawatt PV project. This project would be segmented in three phases starting from one MW up to 20 MWs on 210 acres. It is a Long term land lease and indefinite term utility contract. At 20 MWs, the system would provide nearly 78 percent of the electricity used by the industrial side of DMAFB and would be the largest solar power project in Southern Arizona. This project decreases the amount of traditionally produced electric power and by switching to renewable energy; allows DMAFB to drastically improve its carbon footprint and environmental compliance. Also, we've teamed with the National Aeronautics and Space Administration (NASA) and Naval Facilities Command (NAVFAC) to test the feasibility of installing a "solar" absorption chiller to cool a large facility. The technology itself is not new, but the "concentrating" solar collectors being employed with the "idea" are new to the market. Under this "solar" powered air conditioning project, the group is competing for Department of Defense (DOD) funding.

At DMAFB we're focused on the positive results from conservation. We're standing in concert with an Air Force wide mandate of all Military Construction funded facilities being Leadership in Energy and Environmental Design (LEED) certified to at least the silver level. Currently, we have a total of 13 projects registered to be certified to the LEED Silver level. We're also working with the University Of Arizona School Of Architecture to enlist the assistance of both their students and their energy modeling lab to complete a comprehensive energy audit of the Base Main Exchange to improve the energy efficiency of one of the largest facilities on DMAFB.

DMAFB units fly within and use various Military Ranges, Military Operating Areas (MOAs) and Military Training Routes (MTRs) throughout the state of AZ. Coordinated and compatible development and transmission of energy adjacent or under these areas must be balanced in order to ensure the viability of the DoD mission and its inherent economic impact within the state of AZ.